

# 1 Nursery Tree Pruning: Biology and Best Management Practices

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## 2 What will we cover?

- ▶ Key points
- ▶ Why train young trees?
- ▶ What happens without pruning?
- ▶ Let's make some cuts

## 3 Terminology

- ▶ Branch bark ridge (BBR)- raised bark on top/sides of branch union
- ▶ Branch collar- wood at branch base turns abruptly downward, wraps around trunk or bigger branch wood
- ▶ Codominant stems- stems growing at same rate, nearly same diameter
  - ▶ Stem bark ridge- raised bark in union of two stems
- ▶ Bark inclusion- bark pinched/imbedded between two adjoining; prevents formation of BBR; indicates weak union
- ▶ Aspect ratio- ratio between branch and trunk diameter measured just beyond branch union

## 4 Branches

- Similar in structure & function to trunk

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## 6 Branch attachment

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## 8 BARK INCLUSION

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- ▶ Dominant leader- one stem (trunk) that grows larger than all other stems and branches; at least 1/3 larger than lateral branches
  - ▶ Double leader- two codominant stems originating from center of tree

that jointly share role of leader

- ▶ Normal wood- develops on an upright trunk or stem
- ▶ Permanent crown- remains majority of tree's life; different in nursery than landscape



10  **CODOMINANT STEMS  
AND  
SINGLE LEADER**

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13  **When You DO NOT Pay Attention to Tree Biology...**

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16  **Types of Pruning Cuts**

- ▶ Reduction cut- reduces branch or stem length to a live lateral branch
- ▶ Heading cut- reduces branch or stem length w/out regard to position or diameter of laterals
- ▶ Removal cut (collar cut)- removes branch from trunk or parent branch at collar



17  **Young Shade Trees**

- Develop one dominant trunk
- Remove/shorten (subordinate) aggressive branches
- Eliminate touching branches
- Cut girdling roots

18  **Subordinate codominant leaders**

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- 2 ▶ Remove anything that competes with the central leader
- ▶ Subordination of aggressive branches slows growth on those branches
    - ▶ Keeps diameter of these branches smaller in comparison to main leader

20  **Imagine a cone**

21  **Leader Training- 3 Steps**

1. Locate best stem to train as leader. Usually one in crown center
2. Locate stems/branches competing with leader
3. Remove or subordinate stems/branches to allow leader dominance

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- Maintain some lower limbs, initially to build taper
- Subordinate aggressive limbs

23  **Comparison of Response to Various Pruning Cuts**

24  **Wrap up**

- Subordination cornerstone to sound structure for landscape
- Pruning in the nursery is critical to what happens in the landscape!
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